Product Manager Firefinder
U.S. Army Communications-Electronics Command
Fort Monmouth, New Jersey 07703-5000

Maintenance Bulletin

AN/TPQ-36/37 Radar Systems	FILE NO: 163	REVISION:
	DATE: 08/19/03	CATEGORY: O Maintenance
SUBJECT: Ritec Printer Alignment Procedures	SYSTEMS AFFECTED: All	

1. **Reference**: Ritec Print Head/Roller Adjustment Procedure, Firefinder Radar, 08/03/03; Ritec9900400.
2. **Scope**. Defines the print head/roller force test and adjustment procedures for the Firefinder thermal printer identified by Ritec 9900400-009.
3. **Tools and Support Equipment**.

The following tools and support equipment are required to perform the force test and alignment procedure.

Description	Manufacturer	Part No.
Force gauge capable of measuring 32 oz ± 1.6 oz	Any	Any
5/64" socket-head screwdriver or wrench (1)	Any	Any
Electrostatic discharge (ESD) ground strap	Any	Any
Polyester/cloth tape (or equivalent) (2)	Any	Any
Masking tape (or equivalent)	Any	Any

(1) Print head assembly is secured with either Philips or socket-head screws.

(2) Essential material for accurate performance of the tension test.

4. **Test and Adjustment Procedures**.

The following procedures may be performed in the shelter or on a maintenance bench. The print head and roller should be cleaned prior to performing the specified activities.

4.1. Print Head Force Test

To be performed accurately, the print head force test must be conducted with either a full roll or 2 foot length of paper. Perform the following steps to determine if the force adjustment is correct.

a. Apply a piece of durable tape (polyester/cloth) to the leading edge of the paper and punch a 1/4-inch hole in the reinforced area to facilitate attachment of the force gauge (Figure 4-1).

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b. If a full roll of paper is used, ensure that the paper is routed correctly over the first roller and out the front door (Figure 4-2). Do not thread the roll through the entire paper path.

c. Close and secure the front door of the printer.

Figure 4-1: Force Test Paper Reinforcement

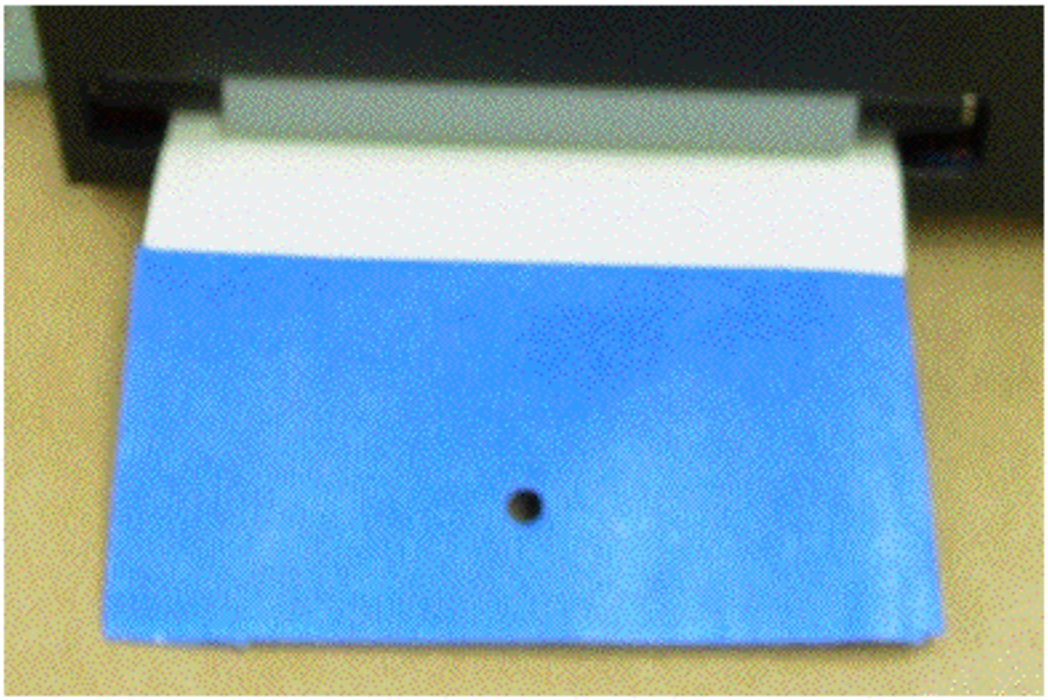

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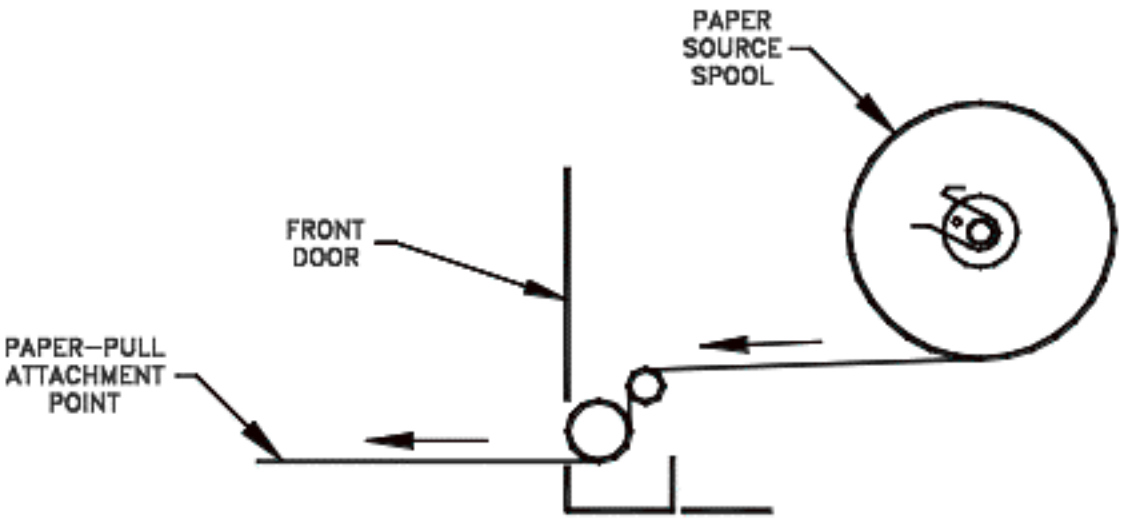
Figure 4-2. . Force Test Routing of Roll Paper



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d. With the force gauge inserted in the reinforced hole in the paper, measure the force required to pull the paper across the print head. Verify that the required force is as follows:

Full paper roll: 24 oz nominal (20 to 32 oz)

2-foot strip: 16 oz nominal (12 to 24 oz)

If the force is not within specifications, perform the print head force adjustment procedure.

4.2 Print Head Force Adjustment

Perform the steps defined below to adjust print head force. It is crucial that adjustments be made equally between both sides and the top/bottom screws (Figure 4-3).

a. Increase/decrease print head force as required to achieve the pressure reading specified in 4.1.d.

Increase force: Using the upper screws, tighten 1/4-turn per 8.8 oz per side.

Decrease force: Using the lower screws, tighten 1/4-turn per 3.68 oz per side.

b. After each adjustment, verify that all four screws are making contact with the pressure plate.

c. Perform the print head force test (4.1). If the measurement is within specifications, the adjustment procedure is complete. If the force measurement is not as specified, repeat the adjustment procedure until the proper tension is obtained.

4.3 Paper Delivery Verification

Load paper (Figure 4.4), power-up the printer, and toggle the Paper Advance switch downward for a few seconds. Verify that the media advances smoothly through the paper path.

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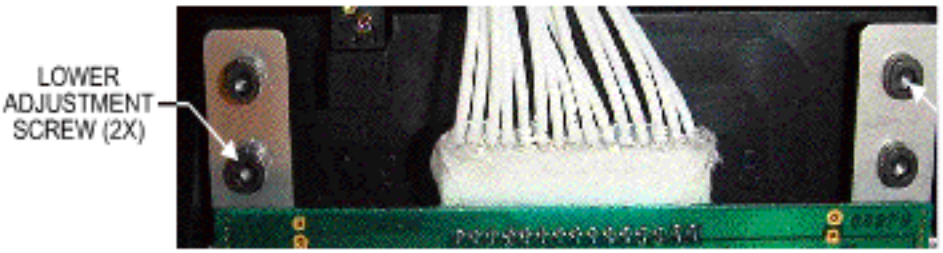
Figure 4-3. Print Head Adjustment Screw Location



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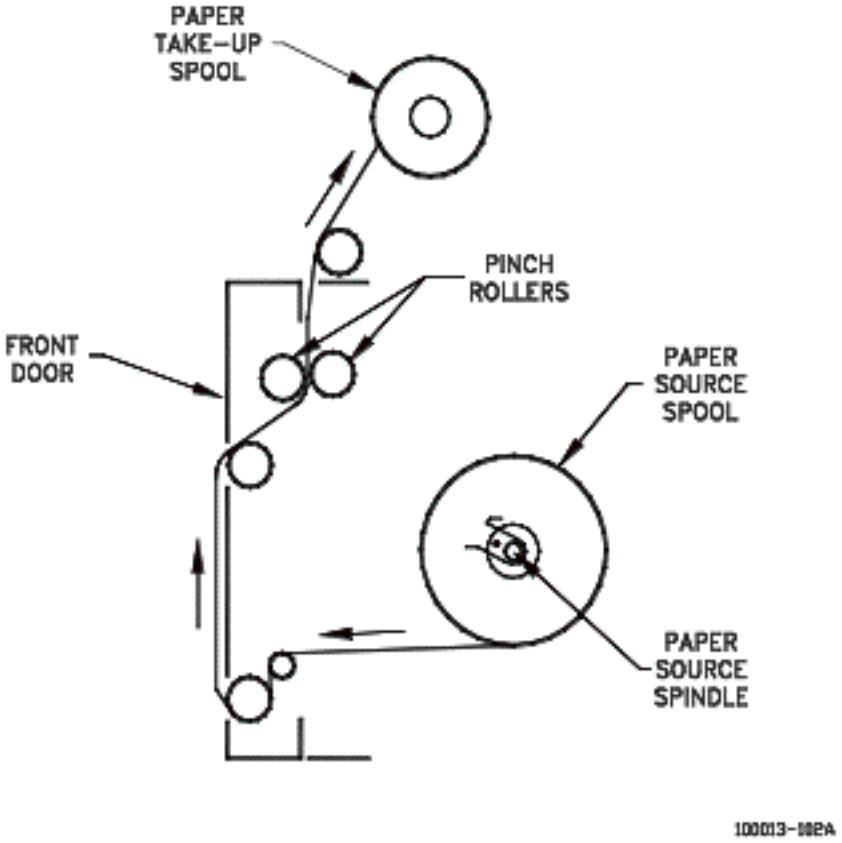

Figure 4-4 Paper Path

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